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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,846	11/21/2003	Rima Kaddurah-Daouk	AVZ-001CPUSCN	1479

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EXAMINER	
SHIBUYA, MARK LANCE	
ART UNIT	**PAPER NUMBER**
1639	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/718,846	KADDURAH-DAOUK ET AL.	
	Examiner	Art Unit	
	Mark L. Shibuya, Ph.D.	1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,7 and 8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,7 and 8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/24/06 & 12/20/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 2, 7 and 8 are pending and examined.

Priority

2. This application is a continuation of 08/853,174, filed 5/7/1997, now US 6,706,764; which is the national stage of PCT/US95/14567, filed 11/7/1995; which is a continuation of 08/336,388, filed 11/8/1994, now abandoned.

Information Disclosure Statement

3. The information disclosure statements (IDS) submitted on 4/24/2006 and 12/20/2006 was filed after the mailing date of the non-final rejection on 4/20/2006. The submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner. The foreign language publication, Nuti et al., citation no. C3, IDS filed 4/24/2006, has been considered only to the extent of the English language abstract.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 2, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jennings, WO 94/17794 (8/18/1994; IDS filed 10/1/2004, cite no. A10), in view of Coffin, US 5,492,930 (2/96; filed 4/94; IDS filed 10/1/2004, cite no. A4).

This rejection is maintained for the reasons of record, as set forth in the previous Office action. The rejection is copied below for the convenience of the reader.

The claims are drawn to methods for treating a subject afflicted with amyotropic lateral sclerosis, comprising administering to the subject an amount of creatine or creatine phosphate, such that the subject is treated for amyotropic lateral sclerosis; and wherein the subject is human.

Jennings teaches compositions comprising amounts of creatine and creatine phosphate (e.g., see creatine and glycine derivative I, where Y is H_2PO_3), for use in treating wasting diseases, such as multiple sclerosis; and dementias, such as Alzheimer's disease. See Abstract; pages 3-5 and claims. Jennings, at p. 2, teaches that creatine derivatives blended with one or more sugars can enhance tissue formation in animals. Jennings, at p. 3, teaches the treatment of wasting disease by the administration of creatine-containing compositions, and contemplates enhancing tissue formation in diseased cardiac muscle.

The Jennings reference differs from the presently claimed invention by failing to specifically teach the use of creatine, or creatine phosphate, to treat amyotropic lateral sclerosis (ALS).

Coffin teaches that Alzheimer's, as well as ALS, are members of a class of CNS neurodegenerative diseases with common etiology (e.g., changes in excitatory amino acid transmission) and symptoms (e.g., reduced cognitive ability, e.g., dementia) and thus are often similarly treated. See, e.g., Coffin at col. 1.

It would have been prima facie obvious to one of ordinary skill in the art at the time of applicant's invention to use the Jennings' creatine, or creatine phosphate, compositions to treat ALS, because Jennings teaches the general treatment of dementia and Alzheimer's disease and the Coffin reference indicates that drugs for treating dementia are useful in treating related neurodegenerative disorders (e.g., related by etiology and or symptoms), such as Alzheimer's dementia.

Accordingly, one of ordinary skill in the art would be motivated to utilize creatine, or creatine phosphate, to treat ALS, in addition to dementia and Alzheimer's, as taught by Jennings, because these disease states share common etiology and/or symptoms, as disclosed in the Coffin reference.

Response to Arguments

Applicant argues that one of ordinary skill in the art would appreciate that each disease has unique characteristics and so would not be motivated to combine the teachings of Coffin with Jennings. Applicant argues that because Jennings does not teach that creatine or creatine phosphate can treats certain neurodegenerative disorders.

Applicant's arguments, entered 10/19/2006, have been fully considered but they are not persuasive.

One of ordinary skill in the art would be motivated to utilize creatine, or creatine phosphate, to treat ALS, in addition to dementia and Alzheimer's, as taught by Jennings, because these disease states share common etiology and/or symptoms, as disclosed in the Coffin reference. One of ordinary skill in the art would have had a reasonable expectation of success because Jennings teaches the general treatment of dementia and Alzheimer's disease and the Coffin reference indicates that drugs for treating dementia are useful in treating related neurodegenerative disorders.

6. Claims 1, 2, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jennings, WO 94/17794 (8/18/1994; IDS filed 10/1/2004, cite no. A10), in view of Flohe et al., US 4,788,179 (11/1988; filed 12/1985).

This rejection is maintained for the reasons of record, as set forth in the previous Office action. The rejection is copied below for the convenience of the reader.

The claims are drawn to methods for treating a subject afflicted with amyotropic lateral sclerosis, comprising administering to the subject an amount of creatine or creatine phosphate, such that the subject is treated for amyotropic lateral sclerosis; and wherein the subject is human.

Jennings teaches compositions comprising amounts of creatine and creatine phosphate (e.g., see creatine and glycine derivative I, where Y is H_2PO_3), for use in treating wasting diseases, such as multiple sclerosis; and dementias, such as Alzheimer's disease. See Abstract; pages 3-5 and claims. Jennings, at p. 2, teaches that creatine derivatives blended with one or more sugars can enhance tissue formation in animals. Jennings, at p. 3, teaches the treatment of wasting disease by the administration of creatine-containing compositions, and contemplates enhancing tissue formation in diseased cardiac muscle.

The Jennings reference differs from the presently claimed invention by failing to specifically teach the use of creatine, or creatine phosphate, to treat amyotropic lateral sclerosis (ALS).

Flohe et al., US 4,788,179, at col. 1, lines 8-22, teach that ALS causes the muscles to waste away, so that although the patient's intellect remains clear, the patient is trapped, by the disease's degenerative process, in an increasingly useless, dying body. Flohe et al., at Example 2, col. 5, for

example, teaches the use of a peptide mendicant that resulted in an improvement in muscle weakness in an ALS patient, thereby allowing him some measure of temporary independence in everyday life.

It would have been *prima facie* obvious, at the time the invention was made, for one of ordinary skill in the art to have made used methods of treating humans afflicted with amyotropic lateral sclerosis (ALS) by administering an effective amount of creatine or creatine phosphate.

One of ordinary skill in the art would have been motivated to use methods for treating ALS, because the reference of Jennings teaches that creatine and creatine phosphate may be used to treat wasting disease, including wasting disease that affects muscle (such as cardiac muscle), and because Flohe et al., teach that treating the muscle wasting of ALS patients can result in a temporary improvement in the everyday life of the patient.

One of ordinary skill in the art would have had a reasonable expectation of success in ameliorating muscle wasting, as in ALS, because Jennings teaches that creatine and creatine phosphate compositions are effective in treating wasting disease.

Response to Arguments

Applicant argues that one of ordinary skill in the art would appreciate that each disease has unique characteristics and so would not be motivated to combine the teachings of Flohe with Jennings because Jennings does not teach or suggest treating ALS. One of ordinary skill in the art would not be motivated to combine the teachings of Flohe with the teachings of Jennings because the teachings of Flohe are directed to the use of dipeptide derivatives, not creatine or creatine phosphate. Applicant argues that one of ordinary skill in the art would not use the creatine compositions of Jennings because these compounds are "alleged" to treat one symptom of the disease

Applicant's arguments, entered 10/19/2006, have been fully considered but they are not persuasive.

One of ordinary skill in the art would be motivated to utilize creatine, or creatine phosphate, to treat ALS, in addition to dementia and Alzheimer's, as taught by Jennings, because Jennings teaches that creatine and creatine phosphate may be used to treat wasting disease, including wasting disease that affects muscle (such as cardiac

muscle), and because Flohe et al., teach that treating the muscle wasting of ALS patients can result in a temporary improvement in the everyday life of the patient.

Double Patenting

7. Claims 1, 2, 7 and 8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4, 7, 8, and 13 of copending Application No. 10/718,765.

This rejection is maintained for the reasons of record, as set forth in the previous Office action. The rejection is copied below for the convenience of the reader.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the method for treating a subject afflicted with amyotropic lateral sclerosis, comprising administering to the subject an amount of creatine (as in claim 1) or creatine phosphate (as in claim 2), such that the subject is treated for amyotropic lateral sclerosis, is anticipated by the method for treating a subject afflicted with a nervous system disease comprising administering to the subject an amount of creatine, creatine phosphate or a creatine analog or a salt thereof compound sufficient to prevent, reduce ameliorate or eliminate the disease. Claim 3 of the '765 application recites that the subject is a human, as in claims 2 and 8 of the instant claims. The '765 application, in the abstract, defines nervous system disease to include amyotropic lateral sclerosis.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

Applicant argues that the instant claims are not obvious over claims 1-4, 7, 8 and 13 of U.S. Serial No. 10/718,765, because the instant invention is a patentably distinct sub-genus. Applicant argues that the use of creatine and creatine phosphate are particularly advantageous for the treatment of ALS.

Applicant's arguments, entered 10/19/2006, have been fully considered but they are not persuasive. The '765 application, in the abstract, defines nervous system disease to include ALS.

Conclusion

8. Claims 1, 2, 7 and 8 stand finally rejected.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark L. Shibuya, Ph.D. whose telephone number is (571) 272-0806. The examiner can normally be reached on M-F, 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. James Schultz can be reached on (571) 272-0763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark L. Shibuya, Ph.D.
Primary Examiner
Art Unit 1639